Docket No.: 50107-408

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

David Simpson, et al.

Serial No.: 08/948,328

Filed: October 10, 1997

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MAR 0 2 2001

Technology Center 2600

Group Art Unit: 2645

Examiner: A. Hoosain

For: PERSONAL NETWORK NEWSCASTER WITH ENHANCED TEXT TO SPEECH SYNTHESIS

TRANSMITTAL OF APPEAL BRIEF

Commissioner for Patents
Washington, DC 20231

Sir:

Submitted herewith in triplicate is Appellant(s) Appeal Brief in support of the Notice of Appeal filed February 9, 2001. Please apply the fee submitted with the earlier Appeal Brief on May 30, 2000 to cover the current Brief. In response to the earlier Appeal, prosecution was reopened.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees if any due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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For: PERSONAL NETWORK NEWSCASTER WITH ENHANCED TEXT TO SPEECH SYNTHESIS

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

This Brief is submitted pursuant to the appeal of the non-final rejection of claims 8,

10, 11, 13 and 19 through 27, filed February 9, 2001.

REAL PARTY IN INTEREST

The real party in interest in this application is Bell Atlantic Network Services, Inc.

(now Verizon).

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are believed to affect or be affected by a decision in

this appeal. A Notice of Appeal and Appeal Brief 9 (May 30, 2000) were filed earlier in the

present application, prosecution thereafter having been reopened by the Examiner.

STATUS OF CLAIMS

Claims 1 through 27 stand under rejection. Of these claims, appeal has been taken only to the rejection of claims 8, 10, 11, 13 and 19 through 27. The rejection of claim 26 is not being contested at the present time in this Brief. Thus, for the purposes of this appeal, claims 8, 10, 11, 13, 19 through 25 and 27 are at issue. Although the last Office Action of record has not been made final, the claims have been rejected at least twice in separate Office Actions. Claims 19 and 27 are the only claims on appeal that are currently framed in independent form. Claims 20 through 25 are dependent from claim 19. The remaining claims on appeal appear in the record in dependent form, depending from pending claims that are not now on appeal. Appealed claim 8 is dependent from claim 7 which, in turn, is dependent from independent claim 1. Appealed claims 10 and 11 are each directly dependent from independent claim 1. Appealed claim 13 is directly dependent from independent claim 12. The attached Appendix includes the claims on appeal as well as the claims from which appealed claims depend.

STATUS OF AMENDMENTS

No Amendments have been filed after the last Office Action of record, dated December 6, 2000.

SUMMARY OF INVENTION

The present invention implements what can be characterized as a personalized message service for a plurality of subscribers having terminals such as, for example, any of various portable implementations that utilize wireless communication. A computer, such as a personal computer (PC) coupled to a data network, may also be a subscriber terminal. The

service delivers to a subscriber particular information requested by the subscriber or messages

identified for delivery to the subscriber. The sources of information cover a wide range and

may comprise, for example, news information sources such as API, UPI, Nexus, Dow Jones

and the like. Information and message data originate as text data, but ultimately are converted

to speech for the subscriber. The text messages may include E-mail, news-group postings and

web page information. The subscriber, thus, is provided with customized information in

audible speech without the need for reading a display.

Fig. 1 exemplifies, in block diagram, system architecture of one embodiment in which

the sources are illustrated as news sources. A service provider may operate one or more

network computer servers 10. Server 10 comprises a computer system having one or more

data communication interfaces 11 for obtaining information from a number of sources 20.

Information text messages are classified and stored in a database 12. Various applications are

run on the server operating system. For example, an application program is run for

controlling the physical elements of the interfaces 11 and for processing, classifying and

storing the input text messages. An associated application program 13 develops, stores and

maintains subscriber profile records, stored in database 14. Highly specific selection options

allow each subscriber to establish a personalized profile to control selection of those items of

interest. As new information items are accumulated in the various sources, they become

available to the server. The program software classifies items received from the various

sources into different subject matter categories.

Various types of subscriber terminals are illustrated. Each of the terminal devices

comprises a concatenative type speech synthesizer. This type of synthesizer uses a stored

database vocabulary of recorded natural speech sound samples. The synthesizer concatenates

coded speech segments together in a specified sequence and performs some signal processing to provide inflection or intonation and to smooth transitions between segments, to produce an electrical speech waveform signal. The server 10, in the network, determines the appropriate stored sounds and the parameters of the playback of those sounds, needed to produce a high quality speech output corresponding to the received input text. The synthesizer in the terminal plays back the sounds selected by the server, and in the manner specified by the server, to reproduce the information from the original text message in a spoken language form.

At the server, the application 15 converts the text to the high level speech parameters (sound sample identifications and waveform control parameters) and a succeeding application 17 formats the speech parameters into an instruction set. A number of instruction sets and protocols may be used. The preferred implementation utilizes MIDI (Musical Instrument Digital Interface) commands. The receiving terminal, rather than synthesize music, interprets the received commands that are then used to control the speech synthesizer in the terminal. The resulting instructions identify sequences of individual sounds for waveform synthesis and certain control parameters for each sound sample, which a synthesizer can use to ultimately synthesize a voice waveform to drive an audible output.

Reference is made to the specification for a more detailed description of the present invention.

ISSUES

Whether claims 8, 10, 11, 13, 19, 20, 22, 23 and 25 are anticipated by U.S. Patent 5,943,648, issued to Tel (hereinafter "Tel") under 35 U.S.C. §102(e).

Whether claim 27 is unpatentable over Tel in view of U.S. Patent 5,915,237, issued to Boss et al. (hereinafter "Boss") under 35 U.S.C. §103(a).

Whether claims 21 and 24 are unpatentable over Tel in view of U.S. Patent 6,115,384, issued to Parzych (hereinafter "Parzych") under 35 U.S.C. §103(a).

GROUPING OF CLAIMS

The claims each contain specific individual recitations which, in context, are believed to warrant separate consideration for patentability. The claims do not stand or fall together. Each of the claims is discussed in the "ARGUMENT" section that follows.

ARGUMENT

1. Claims 8, 10, 11, 13, 19, 20, 22, 23 and 25 are not anticipated by Tel under 35 U.S.C. §102(e).

Anticipation, under 35 U.S.C. § 102, requires that each element of a claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983); *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1920 (Fed. Cir. 1989) *cert. denied*, 110 S.Ct. 154 (1989). The term "anticipation," in the sense of 35 U.S.C. § 102, has acquired an accepted definition meaning "the disclosure in the prior art of a thing substantially identical with the claimed invention." *In re Schaumann*, 572 F.2d 312, 197 USPQ 5 (CCPA 1978).

The initial burden of establishing a basis for denying patentability to a claimed invention rests upon the Examiner. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988); *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985); *In re Piasecki*, 745 F.2d

1468, 223 USPQ 785 (Fed. Cir. 1984). To satisfy this burden, therefore, each and every

element of the claimed invention must be shown by the Examiner to be disclosed in Tel.

Appellant respectfully asserts that the record fails to meet this requirement.

Each of claims 8, 10, 11, 13, 19, 20, 22, 23 and 25 recites at least one requirement that

the Office Action of record has not identified in the disclosure of Tel. Thus, no prima facie

case of anticipation has been established. Appellant respectfully submits that each of these

claims patentably distinguishes from Tel, as discussed below.

Claim 8 recites, *inter alia*, a news information server programmed to execute

sequences of program instructions for: storing profile information regarding news topics of

interest to individual subscribers; receiving and storing news items from one or more sources;

comparing the stored news items to the stored profile information to identify news items of

interest to each individual subscriber; addressing mail messages containing text information

representing the items of interest to subscribers mail boxes in the mail system; and

transmitting the mail messages containing text information representing the items of interest

to the mail system recited in parent claim 7. The mail messages are converted to speech

synthesizer instructions in accordance with the recitation of parent claim 1 and then

transmitted to the subscriber terminals. Claims 10 and 13 recite similar subject matter, except

for the mail system. Independent 19 recites, inter alia,

> storing subscriber profiles relating to topics of interest to a plurality of
> individual subscribers; receiving items of information from a plurality of
> sources; comparing the items of information to the subscriber profiles to
> identify items of interest to particular subscribers; converting textual
> information relating to at least some of the identified items of interest to
> sequences of speech synthesizer instructions; transmitting each of the

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sequences of instructions to one or more terminals, each terminal being utilized by a subscriber.

Claims 20, 22, 23 and 25 are dependent from claim 19, thus requiring the subject matter quoted above. Claim 20, in addition, requires computing linguistic parameter specifications from input text data; converting the linguistic parameters into synthesizer control parameters, the synthesizer control parameters identifying the samples in an order corresponding to the input text data and specifying the manner of adjusting the process parameters for the identified samples.

It is submitted that Tel lacks disclosure of the above discussed claim subject matter. With respect to claim 8, the Office Action points to column 3, lines 60-65, and column 5, lines 44-51, for disclosure of the claimed requirement of storing profile information regarding news topics of interest to individual subscribers. Appellant does not agree. Column 3 is silent as to the storing of profile information. Rather, that portion of the patent discusses output of "raw text" in response to a user's request or an electronic mail event, or a scheduled information dispensing task. There is no disclosure therein of storing subscriber profile information that is to be used, as later required in the claim, for comparison with incoming news items that are stored, the items identified by the comparison then to be provided for text to speech conversion and transmission to the subscriber that corresponds to the profile.

The portion of column 5 relied upon in the Office Action describes predefined voice profiles, such as separate voice profiles for men and women. These profiles are unrelated to profiles that identify news topics of interest to individual subscribers. The Office Action further points to column 5, lines 52-65. This passage discusses a Web server that, whenever a Web page is accessed, may generate the same speech message derived from a set of text files.

It is submitted that this passage has no discernible bearing on the claim requirements herein under discussion. There is no mention of storing profile information regarding news topics of interest to individual subscribers. The additional portions of Tel (column 8, lines 44-51, and column 6, lines 54-64) identified in the Office Action are no more relevant to these claimed requirements.

With respect to claim 13, the Office Action (pages 5, 6) relies on Tel at column 4, lines 47-51 and column 7, lines 2-25. Appellant has carefully studied these portions of the reference and can find no teaching therein for the claim subject matter purported to be associated therewith in the Office Action.

Claim 11 requires that the subscriber terminal speech synthesizer comprise a memory storing a plurality of fundamental sound samples, in digitized form and a concatenative speech synthesizer responsive to the instructions, for processing samples from the memory in an order specified by the instructions and to control parameters of each of the processed samples in a manner specified in the instructions, to thereby generate the speech waveform signal. The Office Action (page 4) identifies elements 112 and 128 of Fig. 2 as disclosing a memory that anticipates the memory recited in the claim. However, Fig. 2 is clearly designated as the **transmitting** subsystem, which is not the subscriber terminal. With respect to the claim requirement for a concatenative speech synthesizer, the Office Action relies on elements 128 and 130 of Fig. 1. These elements also are part of the transmitting subsystem. It is submitted that the Office Action has failed to identify a prior art disclosure of a subscriber terminal that embodies the memory and concatenative speech synthesizer as specifically required by claim 11.

In summary, it is submitted that the record fails to establish anticipation of claims 8, 10, 11, 13, 19, 20, 22, 23 and 25.

2. Claim 27 is not unpatentable over Tel in view of Boss under 35 U.S.C. §103(a).

In the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The Examiner must provide a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). The Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Independent claim 27 requires, *inter alia*, that the server is programmed to execute

sequences of program instructions for performing a significant portion of a text to speech

process to convert the textual information of at least one of the messages to speech

synthesizer instructions in the form of MIDI (Musical Instrument Digital Interface)

commands, and for transmitting the speech synthesizer instructions over the data

communication network. The subscriber terminal receives the speech synthesizer instructions

via the data communication network. The subscriber terminal comprises a speech synthesizer

for synthesizing a speech waveform signal representing the at least one message from the

speech synthesizer instructions.

The latest rejection of claim 27 is set forth at pages 11 and 12 of the Office Action of

December 6, 2000. The Office Action recognizes that Tel does not teach speech synthesizer

instructions in the form of MIDI commands. Boss is described therein as teaching a computer

with MIDI commands. The Office Action concludes that "it would have been obvious . . . to

provide the said Tel's reference with MIDI commands for outputting speech as taught by the

said Boss' reference in order to output speech from a sound card in a standard digital format."

It is submitted that the record does not fulfill the Examiner's burden of establishing

obviousness set out in the decisions cited above. Boss does not disclose text to speech

conversion. Rather, the MIDI involvement of Boss (Fig. 1) occurs after analog speech,

obtained from a microphone output has been converted to digitized speech signals, and

subjected to a speech analyzer. The MIDI operation encodes the already analyzed digitized

speech signals into a standard digital format. While the Tel arrangement provides text to

speech conversion, there is nothing evident therein that would have indicated that speech

output would require further conversion to a standard format, as implied by the Examiner's

conclusion. On the contrary, the receiving station of Tel is a computer subsystem that provides a speech output. An artisan would have concluded that the output of Tel is in a standard format that permits audible speech.

As indicated in column 2 of Boss, the use of the MIDI format has conventionally been recognized for, and associated with, synthesizing and generating music. The fact that MIDI is one type of digital format would not have suggested its replacement for a more conventional standard digital speech format in a text-to-speech conversion environment. Tel does not discuss the use of MIDI format. Tel indicates that the arrangement disclosed therein operates in at least a satisfactory manner. Thus, it is submitted that a person of ordinary skill in the art, having both the Tel and Boss patents before him, would have had no motivation to modify Tel in the manner proposed by the Office Action.

Moreover, the Office Action is silent as to how the Examiner proposes to make such a modification. The elements of Tel that are to be changed to accommodate the Examiner's modification have not been identified, let alone their proposed modifications discussed. The MIDI speech encoder described by Boss outputs an encoded speech signal in MIDI digital signal format. Claim 27 requires performing a significant portion of a text to speech process to convert the textual information of at least one of the messages to speech synthesizer instructions in the form of MIDI (Musical Instrument Digital Interface) commands. The artisan would have had found nothing in the combined disclosures of the references for teaching how to use text to speech process to convert textual messages into MIDI format speech synthesizer instructions. No such explanation has been included in the Office Action.

For the above reasons, it is submitted that the record has not established a valid rejection of claim 27 under 35 U.S.C. §103.

3. Claims 21 and 24 are not unpatentable over Tel in view of Parzych under 35 U.S.C. §103(a).

Claims 21 and 24, on appeal herein, are dependent directly from independent parent claim 19.

Independent method claim 19 requires storing subscriber profiles relating to topics of interest to a plurality of individual subscribers, receiving items of information from a plurality of sources, comparing the items of information to the subscriber profiles to identify items of interest to particular subscribers, converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions, and transmitting each of the sequences of instructions to one or more subscriber terminals. The subscriber terminal stores the received sequences of instructions and, in response to one of the sequences of instructions, retrieves sound samples from its memory in an order specified by the one sequence of instructions and adjusts process parameters for the retrieved samples in a manner specified by the one sequence of instructions, to thereby generate a speech waveform signal representative of the identified item of interest.

Claim 21 adds to the subject matter recited in claim 19 the requirement for transmitting at least some of the sequences of instructions over a wireless data link to a plurality of the respective subscriber terminals. Claim 24 adds to the subject matter recited in claim 19 the requirement that at least one of the respective subscriber terminals comprises a portable device with wireless data communication capability enabling wireless reception of sequences of the instructions.

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The Office Action addresses claims 21 and 24 at page 9. Tel is relied upon for teaching the subject matter of parent claim 19. With respect to the additional recitations of the dependent claims, the Office Action states:

> The secondary reference, Parzych, teaches a wireless data link and wireless terminals for receiving information (Figure 2). Having the cited art at the time the invention was made, it would have been obvious to one of ordinary skill in the art to provide the said Tel's reference with wireless network capability for data communications with mobile users as taught by the said Parzych's reference in order to deliver sequences of instructions to users anywhere and anytime.

Thus Parzych has been relied upon merely for its disclosure of wireless data access. Neither Tel nor Parzych discloses storage of subscriber profiles relating to topics of interest to a plurality of individual subscribers receiving items of information from a plurality of sources, comparing items of information received from a plurality of sources to the subscriber profiles to identify items of interest to particular subscribers, and then converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions for transmission to one or more subscriber terminals. It is submitted that, even if Tel were to be modified as proposed in the Office Action, there would have been no motivation in the prior art teachings to provide these claimed method steps. A rejection for obviousness under 35 U.S.C. §103, to be appropriate, must not only establish that it would have been obvious to combine reference teachings but also establish that such combination would have produced the invention required by the claims. It is urged that the record lacks a foundation of obviousness.
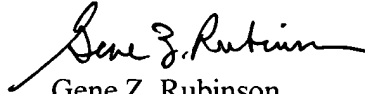
CONCLUSION

For the reasons advanced above, appellant respectfully urges that the rejections of claims 8, 10, 11, 13, 19, 20, 22, 23 and 25 for anticipation by Tel under 35 U.S.C. §102(e); of claim 27 for obviousness in view of Tel and Boss under 35 U.S.C. §103(a), and of claims 21 and 24 for obviousness in view of Tel and Parzych under 35 U.S.C. §103(a) are inappropriate. Reversal of all rejections of these claims is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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APPENDIX

1. A system as in claim 7, further comprising a news information server, said server being programmed to execute sequences of program instructions for:

storing profile information regarding news topics of interest to individual subscribers;

receiving and storing news items from one or more sources;

comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber;

addressing mail messages containing text information representing the items of interest to subscribers mail boxes in the mail system; and

transmitting the mail messages containing text information representing the items of interest to the mail system.

2. A system as in claim 1, wherein the server also is programmed to execute sequences of program instructions for:

storing profile information regarding news topics of interest to individual subscribers;

receiving and storing news items from one or more sources; and

comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber,

wherein said textual information of at least one of the messages comprises one of the identified news items.

3. A system as in claim 1, wherein the speech synthesizer comprises:

a memory storing a plurality of fundamental sound samples, in digitized form; and

a concatenative speech synthesizer responsive to the instructions, for processing samples from the memory in an order specified by the instructions and to control parameters of each of the processed samples in a manner specified in the instructions, to thereby generate the speech waveform signal.

4. A network server as in claim 12, wherein the server also is programmed to execute sequences of program instructions for:

storing profile information regarding news topics of interest to individual subscribers; and

receiving and storing news items from one or more sources;

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comparing the stored news items to the stored profile information to identify news items of interest to each individual subscriber,

wherein said textual information of at least one of the messages comprises one of the identified news items.

5. A method of providing personalized information services, comprising:

storing subscriber profiles relating to topics of interest to a plurality of individual subscribers;

receiving items of information from a plurality of sources;

comparing the items of information to the subscriber profiles to identify items of interest to particular subscribers;

converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions;

transmitting each of the sequences of instructions to one or more terminals, each terminal being utilized by a subscriber;

storing received sequences of instructions in respective subscriber terminals;

in response to one of the sequences of instructions, retrieving sound samples from memory in a subscriber terminal in an order specified by the one sequence of instructions and adjusting process parameters for the retrieved samples in a manner specified by the one sequence of instructions, to thereby generate a speech waveform signal representative of one of the identified items of interest.

6. A method as in claim 19, wherein the step of converting textual information relating to at least some of the identified items of interest to sequences of speech synthesizer instructions comprises:

computing linguistic parameter specifications from input text data;

converting the linguistic parameters into synthesizer control parameters, said synthesizer control parameters identifying the samples in an order corresponding to the input text data and specifying the manner of adjusting the process parameters for the identified samples.

7. A method as in claim 19, wherein the step of transmitting comprises transmitting at least some of the sequences of instructions over a wireless data link to a plurality of the respective subscriber terminals.

8. A method as in claim 19, wherein the step of transmitting comprises transmitting at least some of the sequences of instructions via a packet switched data network.

9. A method as in claim 22, wherein the public switched packet data network comprises the Internet.

10. A method as in claim 19, wherein at least one of the respective subscriber terminals comprises a portable device with wireless data communication capability enabling wireless reception of sequences of the instructions.

11. A method as in claim 19, wherein at least one of the respective subscriber terminals comprises a personal computer for coupling to a public data network enabling reception of sequences of the instructions via the public data network.

27. A system comprising:

a server coupled to a data communication network, said server being programmed to execute sequences of program instructions for:

(a) obtaining textual information for forming messages for a plurality of subscribers,

(b) performing a significant portion of a text to speech process to convert the textual information of at least one of the messages to speech synthesizer instructions in the form of MIDI (Musical Instrument Digital Interface) commands, and

(c) transmitting the speech synthesizer instructions over the data communication network; and

a subscriber terminal for receiving the speech synthesizer instructions via the data communication network, said subscriber terminal comprising a speech synthesizer for synthesizing a speech waveform signal representing the at least one message from the speech synthesizer instructions.